Amendments to the Specification

Please add the following new paragraphs beginning after the paragraph ending on line 4 of page 4:

--Figure 4 is a plan view of a three-dimensional film.

Figure 5 is a partial elevational sectional view of the three-dimensional film of Figure 4.

Figure 6 is a partial elevational sectional view similar to that of Figure 5, but depicting an adhesive included within the three-dimensional structure of the film.--

Please add the following new paragraphs beginning after the paragraph ending on line 2 of page 8:

--Referring to Fig. 4, there is shown a plan view of a representative three-dimensional film, which is generally indicated as 132. Film 132 has a plurality of non-uniformly shaped and sized, preferably hollow, protrusions 134, surrounded by spaces or valleys 136 therebetween, which are preferably interconnected to form a continuous network of spaces within the amorphous pattern. In a preferred embodiment, the width of spaces 136 is preferably substantially constant throughout the pattern of protrusions.

Protrusions 136 are preferably spaced center to center an average distance of approximately two protrusion base diameters or closer, in order to minimize the volume of valleys between protrusions and hence the amount of substance located between them. For applications where it is intended that the protrusions be deformable, the protrusions 136 preferably have heights which are less than their diameters, so that when they deform, they deform by substantially inverting and/or crushing along an axis which is substantially perpendicular to a plane of the film. This protrusion shape and mode of deforming discourages protrusions 136 from folding over in a direction parallel to a plane of the film so that the protrusions cannot block a substance (if present) in the valley between them from contact with a target surface.

Figs. 5 and 6 depict fragmentary elevational cross-sections of film 132 taken at a location where a complete protrusion 134 and both adjoining spaces or valleys 136 can be seen in cross-section. Fig. 5 depicts the three-dimensional structure of Fig. 4 by itself,

with no adhesive or other substance added to the film. In this view, the upper surface of the film which faces the viewer of Fig. 4, and which includes the projecting portions of the protrusions 134, is identified with the numeral 115, and is referred to hereafter as the male side of the film. Correspondingly, the lower surface of the film facing away from the viewer of Fig. 4, which includes the openings of the hollow portions of the protrusions 134, is identified with the numeral 117, and is referred to hereafter as the female side of the film.

Fig. 6 shows the structure of Fig. 4, analogously to Fig. 5, but with a substance 140 added to spaces 136, as well as to the hollow underside of the protrusions 134, in accordance with the teachings of commonly-assigned, co-pending concurrently-filed U.S. patent application Ser. No. 08/744,850 now U.S. Pat. No. 5,871,607, Attorney's Docket No. Case 5922R, filed Nov. 8, 1996, in the names of Peter W. Hamilton and Kenneth S. McGuire, entitled "Material Having A Substance Protected By Deformable Standoffs and Method of Making", the disclosure of which is hereby incorporated herein by reference. Substance 140 partially fills the spaces 136 so that an outer surface of protrusions 134 remain external to the surface level of substance 140 such that the protrusions prevent the substance 140 on the male side of the film from making contact with external surfaces. With regard to the male side of the film, substance 140 partially fills the hollow protrusions such that the reverse side of the valleys or spaces between respective protrusions serves an analogous function in preventing substance 140 within the protrusions from making contact with external surfaces. Substances within different sides of the film 132 and/or within different geometrically-distinct zones within a side of film 132 need not be the same substance and could in fact be distinctly different substances serving distinctly different functions.

"Substance" is defined in this invention as any material capable of being held in open valleys and/or depressions of a three dimensional structure. In the present invention, the term "substance" can mean a flowable substance which is substantially non-flowing prior to delivery to a target surface. "Substance" can also mean a material which doesn't flow at all, such as a fibrous or other interlocking material. "Substance" may mean a fluid or a solid. Adhesives, electrostatics, mechanical interlocking, capillary attraction, surface adsorption, and friction, for example, may be used to hold the substances in the valleys

and/or depressions. The substances may be permanently held in the valleys and/or depressions, or the substances may be intended to be released therefrom when exposed to contact with external surfaces or when the three dimensional film is deformed, heated, or otherwise activated. Of current interest in the present invention include substances such as gels, pastes, foams, powders, agglomerated particles, prills, microencapsulated liquids, waxes, suspensions, liquids, and combinations thereof.

The spaces in the three-dimensional structure of the present invention are normally open; therefore it is desirable to have substances stay in place and not run out of the structure without an activation step. The activation step of the present invention is preferably deformation of the three-dimensional film by compression. However, an activation step to cause substance to flow could be heating the material to above room temperature or cooling it below room temperature. Or it could include providing forces excessive of the earth's gravity. It could also include other deforming forces, such as tensile forces and combinations of these activation phenomena.

In a particularly preferred embodiment, protrusions 136 have an average base diameter of about 0.015 inches (0.038 cm) to about 0.030 inches (0.076 cm), and more preferably about 0.025 inches (0.064 cm). They also have an average center-to-center spacing of from 0.03 inches (0.08 cm) to 0.06 inches (0.15 cm), and more preferably about 0.05 inches (0.13 cm) spacing. This results in a high number density of protrusions. The more protrusions per unit area, the thinner the piece of film and protrusion walls can be in order to resist a given deformation force. In a preferred embodiment the number of protrusions per square inch exceeds 200 and the protrusions occupy from about 30% to about 70% of the protrusion side of the piece of film. They have a protrusion height of about 0.004 inches (0.010 cm) to 0.012 inches (0.030 cm), and more preferably about 0.006 inches (0.015 cm) height. The preferred material is 0.0003 inch (0.0076 mm) nominal thickness high density polyethylene (HDPE).

For fabrication of an adhesive-containing, three-dimensional, film, a preferred layer of substance 140 is preferably a latex pressure sensitive adhesive about 0.001 inch (0.025 mm) thick. Even more preferably, layer of substance 140 may be about 0.0005 inch (0.013 mm) thick layer to about 0.002 inch (0.051 mm) thick layer of hot melt adhesive, specification no. Fuller HL-2115X, made by H. B. Fuller Co. of Vadnais

Heights, Minn. Any adhesive can be used which suits the needs of the material application. Adhesives may be refastenable, releasable, permanent, or otherwise. The size and spacing of protrusions is preferably selected to provide a continuous adhesive path surrounding protrusions so that air-tight seals may be made with a target surface.

Film materials may be made from homogeneous resins or blends thereof Single or multiple layers within the film structure are contemplated, whether co-extruded, extrusion-coated, laminated or combined by other known means. The key attribute of the film material is that it be formable to produce protrusions and valleys. Useful resins include polyethylene, polypropylene, PET, PVC, PVDC, latex structures, nylon, etc. Polyolefins are generally preferred due to their lower cost and ease of forming. Preferred material gauges are about 0.0001 inches (0.0025 mm) to about 0.010 inches (0.25 mm). More preferred gauges are from about 0.0002 inches (0.005 mm) to about 0.002 inches (0.051 mm). Even more preferred gauges are from about 0.0003 inches (0.0076 mm) to about 0.001 inches (0.025 mm).--